

Amendments to the Claims:

1. (Currently Amended) ~~A Method in which~~ method for monitoring a composition of a polymer blend, melt, and /-or solution or combination thereof, used to produce a polymer-is-monitored, wherein comprising:
 - (a) guiding the polymer blend, melt, and /-or solution or combination thereof ~~is guided~~ through an installation volume; ~~during the production and~~
 - (b) withdrawing a sample gas that is formed from the polymer blend, melt, and /-or solution or combination thereof, ~~is withdrawn~~ from the installation volume; and
 - (c) ~~fed~~ feeding the sample gas through a gas line connected to the installation volume and directly to a mass spectrometer-(28), ~~which~~ wherein the mass spectrophotometer automatically outputs an analysis signal representing the composition of the sample gas, ~~characterised in that the sample gas is guided directly from the installation volume to the mass spectrometer (28) through a gas line (29) connected to the installation volume.~~
2. (Currently Amended) ~~Method~~ The method according to Claim 1, ~~characterised in that~~ wherein a transport gas is added to the sample gas in the gas line-(29).
3. (Currently Amended) ~~Method~~ The method according to Claim 2, ~~characterised in that~~ wherein the transport gas (57) is heated.
4. (Currently Amended) ~~Method~~ The method according to Claim 2-or-3, ~~characterised in that~~ wherein the transport gas (57) is fed under pressure.
5. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims~~ Claim 1, ~~characterised in that~~ wherein the gas line (29)-is heated.
6. (Currently Amended) ~~Method~~ The method according to Claim 5, ~~characterised in that~~ wherein the gas line (29) is heated to at least the condensation temperature of the sample gas.

7. (Currently Amended) ~~Method~~ The method according to Claim 5 or 6, characterised ~~in that~~ wherein the gas line (29) is heated to at least 200° C.
8. (Currently Amended) ~~Method~~ The method according to Claim 7, characterised ~~in that~~ wherein the gas line (29) is heated to at least 290° C.
9. (Currently Amended) ~~Method~~ The method according to one of the preceding claims Claim 1, characterised ~~in that~~ further comprising:

~~(d) flushing the gas line (29) is flushed with a flushing gas (58) after the conveyance of the sample gas.~~
10. (Currently Amended) ~~Method according to Claim~~ The method of claim 9, characterised ~~in that~~ wherein the flushing gas (58) is heated.
11. (Currently Amended) ~~Method~~ The method according to Claim 10, characterised ~~in that~~ wherein the flushing gas (58) is heated to a temperature of at least the condensation temperature of the sample gas.
12. (Currently Amended) ~~Method~~ The method according to one of the Claims Claim 9 to 11, characterised ~~in that~~ wherein ~~an oxidizing gas is used as the flushing gas (58) is~~ an oxidizing gas.
13. (Currently Amended) ~~Method~~ The method according to one of the preceding claims characterised ~~in that~~, Claim 1, wherein the installation volume comprises a plurality of sampling sites and wherein the sample gas is fed to the mass spectrometer (28) withdrawn in step (b) from various the plurality of sampling sites (30, 31, 32, 33, 34, 35, 36) of the installation volume in an alternating manner.
14. (Currently Amended) ~~Method~~ The method according to one of the preceding claims characterised ~~in that~~, in a manner that allows fluids to be conducted, a multiple number Claim 13, further comprising connecting the plurality of sampling sites each individually (30 to 36) ~~can each be connected to the mass spectrometer (28) by means of an electronically controlled shut-off device (47, 48).~~

15. (Currently Amended) ~~Method~~ The method according to Claim 14, ~~characterised in that the connection of further comprising connecting~~ the sampling sites (30 to 36) to the mass spectrometer (28) ~~is generated~~ according to a predetermined adjustable clock.
16. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, wherein the polymer is produced by polycondensation.
17. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, wherein the sample gas comprises an exhaust vapour of a reactor system ~~(2, 8, 15, 18, 22) is diverted as a sample gas.~~
18. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 9, further comprising closing the connection between the installation volume and the gas line (29) ~~is closed when the flushing gas (58) is guided through the gas line during step (d).~~
19. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 9, further comprising interrupting the connection between the gas line (29) and the mass spectrometer (28) ~~is interrupted when flushing gas is being guided through the gas line (29) during step (d).~~
20. (Currently Amended) ~~Method~~ The method according to ~~one of the preceding claims characterised in that,~~ Claim 1, further comprising:
 - (e) using at least one reactor system (2, 8, 12, 14, 15, 17, 18, 20, 22, 25) is controlled in dependence on the analysis signal of step (c) to control a reactor system.
21. (Currently Amended) ~~Automatic~~ An automatic analysis device (27) that is arranged in such a way that it can be built into an installation (4) for the production of a polymer from a polymer blend, melt, ~~and / or~~ solution or combination thereof, that is guided through an installation volume, having at least one gas line (29), said gas line (29) being developed in such a way that it can be connected to the installation

volume in a manner that allows the fluids to be conducted and can be opened and closed automatically, and having

at least one mass spectrometer (28) to which a sample gas formed from the polymer blend, melt, ~~and / or~~ solution or combination thereof, can be fed through the gas line (29) during the production of the polymer, wherein an analysis signal that is representative for the composition of the sample gas can be outputted by the mass spectrometer (28).

22. (Currently Amended) ~~Automatic~~ The automatic analysis device (27) according to Claim 21, ~~characterised in that~~ further comprising a controller (37) and a shut-off device (47, 48) controlled by a controller are provided, wherein the gas line can be automatically released by the shut-off device (47, 48) depending on an activation signal from the controller (37).
23. (Currently Amended) ~~Automatic~~ The automatic analysis device (27) according to Claim 21 ~~or 22~~, ~~characterised by~~ further comprising a pumping apparatus (35), by means of which the sample gas can be conveyed to the mass spectrometer.
24. (Currently Amended) ~~Automatic~~ The automatic analysis device (27) according to ~~one of the Claims~~ Claim 21 to 23, ~~characterised in that~~ wherein the gas line (29) is arranged in such a way that it can be shifted into a flushing state by means of being separated from the installation volume and having a flushing gas flow through it.
25. (Currently Amended) ~~Automatic~~ The automatic analysis device (27) according to ~~one of the Claims~~ Claim 21 to 24, ~~characterised by~~ further comprising a heating apparatus (63), by means of which the gas line (29) can be heated.
26. (Currently Amended) ~~Automatic~~ The automatic analysis device (27) according to ~~one of the Claims~~ Claim 21 to 25, ~~characterised in that the multiple number~~ further comprising a plurality of sampling sites (30 to 36), the plurality of sampling sites being distanced from one another, and flow flowing into the a shut-off device (47, 48), and in that by means of a controller one sampling site (30 to 36) at a time can be connected to the mass spectrometer via the shut-off device (47, 48) in a way that it allows fluids to be conducted.

27. (Currently Amended) ~~Installation (1)~~ An installation for the production of a polymer, with comprising at least one reactor system ~~(2, 8, 12, 14, 15, 17, 18, 20, 22, 25)~~, characterised by and an automatic analysis device ~~(27)~~ according to ~~one of the preceding claims~~ Claim 21.
28. (Currently Amended) ~~Installation (1)~~ The installation according to Claim 27, characterised by further comprising a controller ~~(37)~~, by means of which at least one reactor system ~~(2, 8, 12, 14, 15, 17, 18, 20, 22, 25)~~ can be controlled, depending on the analysis signal.
29. (Currently Amended) ~~Installation (1)~~ The installation according to Claim 27 ~~or 28~~, characterised in that wherein the installation ~~(1)~~ is designed as a polycondensation installation.